

WHAT IS CLAIMED IS:

1. A substrate processing system comprising:

a holding means for holding detachably a substrate;

5 a chucking means for chucking the substrate from the holding means in a state that a processes surface of the substrate is directed downward;

a processing means provided under the substrate, for processing the processes surface of the substrate; and

10 a moving means for moving the processing means and/or the chucking means in a horizontal plane.

2. A coating apparatus for forming a coating film on a coated surface by raising a coating liquid that is reserved
15 below a substrate by a capillary phenomenon of a nozzle, bringing the raised coating liquid into contact with the coated surface of the substrate that is directed downward, and/or then moving the nozzle and the substrate, comprising:

a holding means for holding detachably the substrate;

20 a chucking means for chucking the substrate from the holding means in a state that the processes surface of the substrate is directed downward; and

a moving means for moving relatively the nozzle and/or the chucking means in a horizontal plane.

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3. A coating apparatus according to claim 1 or 2, wherein the holding means levers up the substrate to the vertical

direction upon attaching and detaching the substrate by turning the substrate by a predetermined angle.

4. A coating apparatus according to claim 1 or 2, wherein
5 the coating film is made of resist.

5. A coating apparatus according to claims 1 or 2, wherein the substrate is a photo mask blank.

10 6. A coating method of forming a coating film on a coated surface by raising a coating liquid by a capillary phenomenon of a nozzle, bringing the raised coating liquid into contact with the coated surface of the substrate that is directed downward, and then moving relatively the nozzle and the substrate,
15 comprising steps of:

a step of setting the substrate on a holding means such that the processes surface of the substrate is directed downward;

a step of moving relatively vertically the holding means and/or a chucking means to come close to each other in a state
20 that the processes surface of the substrate is directed downward;

a step of chucking the substrate by the chucking means;

a step of moving relatively vertically the holding means and/or the chucking means to separate from each other; and

a step of forming the coating film on the coated surface
25 of the substrate by moving relatively the nozzle and/or the chucking means in a horizontal plane.

7. A coating method according to claim 6, wherein the coating film is made of resist.

8. A coating method according to claim 6 or 7, wherein
5 the substrate is a photo mask blank.